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China's export boom has surged Chinese share in the global export market and has created general concern as to the threat China poses to both U.S. economic dominance and to the developing economies directly competing with Chinese manufacturing. The recent focus of Chinese investment in Mexican manufacturing has generated considerable press and commentary about the danger of Chinese influence in the very 'backyard' of the United States. Concentrating on the maquiladora sector, this paper examines the actual impact on Mexican manufacturing resulting from Chinese competition and the dynamics of the trading relationships between the United States, Mexico and China. The increasing interdependence between the three nations presents a range of opportunities amid apparent risks. The author assesses and weighs these opportunities and risks, ultimately suggesting further research to investigate the potential security impact created by the increasingly complex economic bonds between the three nations.

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CHINA IN MEXICO: MORE OPPORTUNITY THAN RISK

by

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Captain, USN

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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Contents

| Introduction | 1 |
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| Chinese Competition: is it a Valid Threat? | 1 |
| The Proximity Advantage | 7 |
| Wage Differential as Economic Driver | 9 |
| Mexico: Customer and Trade Broker? | 11 |
| Conclusions | 13 |
| Recommendations | 15 |
| Bibliography | 17 |

Abstract

China's export boom has surged Chinese share in the global export market and has created general concern as to the threat China poses to both U.S. economic dominance and to the developing economies directly competing with Chinese manufacturing. The recent focus of Chinese investment in Mexican manufacturing has generated considerable press and commentary about the danger of Chinese influence in the very 'backyard' of the United States. The increasing interdependence between the three nations presents a range of opportunities amid apparent risks, at its best portending an enduring and profitable bond between the three economies. The author assesses and weighs these opportunities and risks in light of the success and failure record of the maquiladora industry over the past 10 years and the changing features and demands of China's export model. The author's conclusions lead to suggestions for further research into the possibility that, as China deepens its economic links to Mexico, it may perceive a similarly vested interest in Mexican security issues.

INTRODUCTION

Since its transformation into a focused export economy in the late 1980s, China has succeeded in dominating major segments of the export market and expanding its customer base world-wide. Its extraordinary success has spurred a general concern in the United States for the future of U.S. economic primacy. The recent focus of Chinese investment in Mexican manufacturing has generated considerable press and commentary about the danger of Chinese influence in the very 'backyard' of the United States. However, actual market data, the interrelationship between the U.S. and Mexican economies and the vast potential for Mexican economic growth tell a very different story in terms of the future value of the relationship between the United States, China and Mexico. In spite of the perception that China's export explosion presents a significant threat to the United States' economic dominance, the United States should welcome China's current investment in Mexican maquiladoras as it serves as a win-win proposition for the U.S., Chinese and Mexican economies.

CHINESE COMPETITION: IS IT A VALID THREAT?

In the past 20 years, China's export market increased by over 25 percent.¹ Chinese manufacturing generated 89 percent of these exports.² This export boom has led to a trade deficit with the United States and concern that China poses a threat not only to U.S. trade, but to competing developing manufacturing economies.³ As one of the top ten developing economies specializing in manufacturing for export revenue, Mexico would appear to have much at stake in

¹ Gordon H. Hanson and Raymond E. Robertson, "China and the Manufacturing Exports of Other Developing Countries," NBER Working Paper w14497, (November, 2008): 1, SSRN (1305507).

² Ibid.

³ Ibid.

terms of competition.⁴ Indeed, the growing economies of Latin America and the Caribbean (LAC) appear to have lost some economic ground since the boom in Chinese exports. For example, the combined share of world exports between China and India is 50 percent larger than that of LAC, a significant change from 1990 when the opposite was true.⁵ The case appears on the surface to be particularly acute with regard to competition for the U.S. market. China's total market share in the United States rose from five percent to 15 percent between 1993 and 2005, a trend which would naturally indicate market share loss by China's competitors, one of which is Mexico.⁶ The prime factor in the Chinese export equation which causes general alarm is the fact that Mexican manufacturing specializes in very similar products to those manufactured by China, raising the expectation that these manufacturing areas would be hit hard by Chinese competition.⁷

The Mexican manufacturing sector most affected by both Chinese competition and investment is the "maquiladora" sector. Maquiladoras are manufacturing facilities created specifically to take components from outside manufacturers (primarily in the United States) and process them (add value) using less costly labor than that available at the supply source. The processed product is then exported back to the original manufacturer where the product is worked into complete goods for final sale. Prior to the North American Free Trade Agreement (NAFTA), Mexico established maquiladoras as Export Processing Zones (EPZs) where low cost labor performs fairly simple processing on products for export and where import/export tariffs

⁴ Ibid.

⁵ Daniel Ledermman, Marcelo Olarreaga, and Guillermo E. Perry, eds., *China's and India's Challenge to Latin America: Opportunity or Threat?* (Washington, D.C.: The World Bank, 2009), 4.

⁶ Hanson, "China and the Manufacturing Exports of Other Developing Countries," 2.

⁷ Ibid., 13.

are either eliminated or held to a low level. Developing countries often establish EPZs with the objectives of increasing productivity, worker skill development, and gaining access to technology. NAFTA now obviates the need for EPZs and the Mexican maquiladoras stand out as a success story. Overall productivity in the maquiladora sector has increased markedly over the past 10 years. Facilities which, in their initial years of operation, could only be relied upon to perform the simplest welding or assembly tasks now perform high quality machining. Since the passing of NAFTA, U.S. exports to Mexico have risen 198 percent and Mexican exports to the United States are up by 336 percent. 10

In spite of this surge in maquiladora exports, China has managed to acquire some of Mexico's share of U.S. imports, but only in specific sectors.¹¹ In 2003, China nudged Mexico out of its position as the second largest exporter to the United States and in 2006 China replaced Mexico as the United States' second largest trading partner (after Canada).¹² This shift has led to claims by unions, various individuals and businesses which tend to exaggerate the negative impact of China on Mexican industry.¹³ Actual research tells a different story. Studies examining the effects of Chinese competition have quantified significant increased productivity in maquiladoras directly affected by Chinese competition.¹⁴ In fact, one study concludes that the productivity growth seen in the past decade was actually triggered by competition with China.¹⁵ There is evidence that Chinese competition negatively impacts some manufacturing areas, but

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⁸ Hale Utar and Luis B Torres-Ruiz, "International Competition and Industrial Evolution: Evidence from the Impact of Chinese Competition on Mexican Maquiladoras," (working paper, University of Colorado, December 1, 2010), SSRN (1802796), 1.

⁹ Ibid.

¹⁰ U.S. Department of State, Bureau of Public Affairs, *The United States and Mexico: A Multi-Faceted Partnership*, (Washington, DC: April 13, 2009).

E. Ayala and M. Villarreal, "The Dragon Menace: Is China Displacing Mexico's Trade with the United States?" *Analisis Economico* 24, 55 (2009): 330, http://www.analisiseconomico.com.mx/pdf/5515.pdf, 330.

¹² Ibid., 328.

¹³ Ibid., 329.

¹⁴ Utar, "International Competition and Industrial Evolution," 27.

¹⁵ Ibid., 4.

the impact is confined to several distinct sectors such as television receivers, textile and machinery manufacturing. ¹⁶ In these areas, Mexico resembles a number of developing economies which have fair reason to fear Chinese competition as they engage in manufacturing the same products produced by the Chinese. However, recent studies reveal that no country whose manufacturing model mirrors that of China has been seriously affected by the Chinese export surge. ¹⁷ In fact, these developing countries (Mexico included) have seen less than a 1.7 percent decrease in demand for their manufactured goods. ¹⁸ This may be explained by the fact that the global market itself has expanded to an extent able to absorb Chinese exports without seriously diminishing space in the market for competition. In the final analysis, Chinese competition has had only a marginally negative effect on Mexico's economy.

The argument that Chinese involvement in the maquiladora industry pushes Mexican business dangerously out of the U.S. market is not supported by actual export data. China has influenced a shift in maquiladora production due to its ability to compete effectively in certain manufacturing areas, such as televisions and electrical components. In spite of this shift, Mexico continues to increase its share of U.S. imports. This indicates room for expansion and the continued ability of Mexican business to adjust to challenges and continue to compete as a major player even in the face of a powerhouse like China. Additionally, manufacturing growth worldwide increased significantly during the last decade. As expected, Chinese manufacturing increased to a greater extent than did that of any other country (19.66 percent between 2000 and

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¹⁶ Kevin P. Gallagher and Roberto Porzecanski, *The Dragon in the Room* (Stanford, CA: Stanford University Press, 2010), 90.

¹⁷ Hanson, "China and the Manufacturing Exports of Other Developing Countries," 16.

¹⁸ Ibid.

¹⁹ Jorge E. Mendoza, "The Effect of the Chinese Economy on Mexican Maquiladora Employment," *International Trade Journal* 24, 1 (2010): 64, http://www.tandfonline.com/doi/pddf/10.1080/08853900903442921.

²¹ Gallagher, *The Dragon in the Room*, 41.

2006), but China essentially only began to compete in the late 1980s.²² U.S. manufacturing increased 4.6 percent during the same period and LAC manufacturing increased by 3.02 percent, Mexico providing half of that increase.²³ Mexico continues to hold its own in terms of world exports ranking 14th at 2.5 percent of world exports (up from .5 in 1990), just below Canada at 2.5 percent.²⁴

The effect of recent trade agreements between Mexico and China illustrates the agility of Mexican business in response to market changes. Chinese imports in Mexico already impact the Mexican economy in more positive than negative ways. Competition has brought down some consumer goods prices (notoriously high in Mexico).²⁵ The competition induced in this sector will mean costs for some business, but should mean improvement in quality in others—and, indeed already has.²⁶ Walmex (Walmart in Mexico) doesn't fall into the category of Maquiladora manufacturing, nor is it Chinese competition, but its experience is worth noting. By 2003, Walmex was Mexico's largest single employer. A study sponsored by the World Bank and published in 2009 concluded that Walmex's supplier policies resulted in increasing supplier productivity and innovation, reflecting similar trends of continuous improvement seen in the maquiladora sector as a result of competition.²⁷ The Mexican industrial economy responds positively to competition. More competition in the maquiladora sector will only result in improvements there that will expand efficiency and capacity.

²² Ibid.

²³ Ibid.

²⁴ Gallagher, *The Dragon in the Room*, 47-48.

²⁵ J. Sargent and L. Matthews, "China versus Mexico in the Global EPZ Industry: Maquiladoras, FDI Quality, and Plant Mortality," *World Development* 37, 6 (2011): 1069-1082, http://ea.panam.edu/cbes/pdf/WorkingPaper1-06.pdf.

²⁶ Ayala, "The Dragon Menace," 344.

²⁷ L. Iacovone, B. Javorcik, W. Keller, and J. Tybout, "Walmart in Mexico: The Impact of FDI on Innovation and Industry Productivity," (Working paper, Penn State University, 2009), http://spot.colorado.edu/~kellerw/IJKT 012609.pdf.

U.S. business benefits from the effects of the increased competition through access to increasingly qualified and educated workers. As labor skills improve, product quality improves and manufacturing technology increases, enabling the performance of more and more complex manufacturing south of the border at lower wage rates. Admittedly, this argument tends to create considerable concern in the United States. Discussion of Chinese expansion in Mexico can hardly ignore some of the arguments that surround NAFTA, such as the claims that it has resulted in job loss in the United States. There is no evidence of net job loss. In fact, from 1994 (inception of NAFTA) to 2008 U.S. employment actually increased by 23 million jobs. 28 Granted, this increase does not owe its generation to Mexican partnerships, but those Mexican partnerships allow American business to produce products at lower cost and to continue to improve global market share in the finished products.

The maguiladora sector has, however, seen contraction over the past 10 years, surprising NAFTA supporters. Loss of a number of facilities and stagnating wages create the suspicion that NAFTA may not be the economic boon it promised to be. Opponents of liberal trade policies claim that free trade subjects Mexico more acutely to the threat of Chinese competition. However, research conducted in the past five years targeted at pinpointing root causes for loss of business in the maquiladora industry has been unable to connect failures of maquiladoras or loss of profit or market share directly to Chinese competition, at least not across the spectrum of maquiladora activity. Not surprisingly, business lost by Mexico correlates more directly with dips in the U.S. economy.²⁹ The complete reliance on U.S. manufacturing, stemming from the fact that the majority of maquiladora business processes are completely integrated with those of their U.S. partners, ensures that any fluctuations in U.S. manufacturing levels directly affect their

 $^{^{28}}$ Stephen W. Hartman, "NAFTA, the Controversy," *The International Trade Journal* 25, 1: 16, http://dx.doi.org/10.1080/08853908.2011.532036.

²⁹ Ayala, "The Dragon Menace," 330.

intermediate processing facilities south of the border. Does increasing Chinese investment in the Mexican maquiladoras threaten the present U.S.--Mexico partnerships in production that have been developed over the past 20 years?

As of October, 2009, Mexico receives the "highest number of FDI [foreign direct investment] projects of Chinese companies outside of China" (109 projects). Most of this investment is occurring in manufacturing (especially automobile), mining and agriculture, with particular emphasis on the very maquiladora sector which provides Mexico's primary exports to the United States via their connections to U.S. manufacturing. This represents part of a significant shift in Chinese policy. Beginning in 2000, China began a transformation from its position as the world's largest recipient of FDI in the 1990s to a 'go global' policy which doubled Chinese outbound FDI between 2005 and 2007. Alarmists tend to view this explosion of Chinese investment as a threatening indicator of expanding Chinese control of the global marketplace. While this may be a valid concern, Chinese investment in the maquiladora sector is much more likely to result in improvement in infrastructure, wage and productivity competition and eventual expansion of Mexican manufacturing capacity. Such improvements benefit Mexico and the United States and come basically "free" to the United States since Chinese investors foot the bill.

THE PROXIMITY ADVANTAGE

Maquiladora development owes its success to its connection to U.S. manufacturing and to the availability and access afforded by proximity to the United States. The infrastructure that has

³⁰ "China Chooses Mexico as its Main Foreign Investment Destination," *FINITEK Blog*, October 1, 2009, http://blog.finetik.com/2009/10/01/china-chooses-mexico-as-its-main-foreign-investment-destination/.

³¹ Ibid.

³² Karl P. Sauvant and Ken Davies, "What Will an Appreciation of China's Currency Do To Inward and Outward FDI?" *Columbia FDI Perspectives*, 30, October 18, 2010, http://www.vcc.columbia.edu/files/vale/print/Perspective 30 - Sauvant and Davies - Oct 18.pdf.

developed to support exportation to the United States enables the synergistic relationship between the maquiladoras and U.S. industry. The primary reason that Mexican manufacturing confines itself to the north is the availability of logistics support (infrastructure routes) and, in recent years, the well-developed skill level of Mexican workers in the north. South of Mexico City, the work environment more closely resembles that of underdeveloped regions and countries with low skill levels and lack of education. Southern infrastructure remains essentially third world. Chinese investment in the maquiladora sector will bring improvement in infrastructure, enhance manufacturing and transportation capability across the maquiladora region and could even spread this capability south. Infrastructure is key to both expanding manufacturing in Mexico and to enabling U.S. exports to reach those markets.³³

The business climate for maquiladoras has fluctuated since the signing of the NAFTA. Some maquiladoras have expanded and some have declined or even shut their doors, particularly in the past five years. As noted earlier, the decline of some manufacturers generates speculation as to the real value of NAFTA to Mexico and raises questions as to the prerequisites for maquiladora survival. Maquiladoras that have thrived post-NAFTA appear to have done so due to proximity to the U.S. markets more than to any other variables. A study published by *World Development* in 2011 examined the changes made by the maquiladora industry in the past decade to ensure survival and competitiveness. The study sought unsuccessfully to correlate specific business improvements (viz. technology changes) or even specializations (shifting from apparel production to other areas not competing directly with China) directly to maquiladora survival.³⁴

³³ Robert A. Pastor, "Strengthening Our Continental Economy," *Philadelphia Inquirer*, September 20, 2011, http://www.philly.com/philly/opinion/20110920 Strengthening our continental economy.html.

³⁴ J. Sargent and L. Matthews, "China Versus Mexico in the Global EPZ Industry: Maquiladoras, FDI Quality, and Plant Mortality," *World Development* 37, 6, (2011): 1069-1082, http://ea.panam.edu/cbes/pdf/WorkingPaper1-06.pdf.

What the study did identify were policies pursuing "proximity dependent strategies." 35 Companies which capitalized on the short supply lines survived where others did not.³⁶ Those manufacturing facilities, to take advantage of such a strategy, operate in the northern regions of Mexico where transportation infrastructure is well-developed.³⁷ Market studies document that Mexican exports of computers and television receivers have lost ground to China in the U.S. market, but Mexico continues to out-perform China in U.S. market share in piston engines and trucks. 38 Mexico most likely owes its edge in these export shares to the weight and transportation cost related to these components, another indication of the significance of proximity to maguiladora survival.³⁹

Proximity, though, is not purely defined by a small region of Mexico. Were other regions further south developed, they could just as easily compete with Northern Mexico for the U.S. market. Adequate infrastructure could enable transportation from all over Mexico, adding only a day between the U.S. border and Mexico's southern-most region, compared to the time lag (and increased cost) of over a week required to transport products from China to the United States.

Even in the well-developed regions of Mexico, China will find numerous areas ripe for investment and improvement which will affect both China and the United States. Transportation, even in the north, remains an area with development potential. U.S. firms supported recent efforts to legalize Mexican trucking companies operating across the border, but the initiative died due to transportation safety concerns. Investment in Mexican trucking would facilitate cross border transportation and affect all industry.

WAGE DIFFERENTIAL AS ECONOMIC DRIVER

36 Ibid.
37 Ibid.

³⁵ Ibid.

³⁸ Gallagher, *The Dragon in the Room*, 90.

³⁹ Ibid.

Of course, proximity to markets is not the raison d'être for the emergence of maquiladoras. Low Mexican wages are the driving force behind the industry, just as low Chinese wages are vital to global advantage for the Chinese export market. However, it is actually the relationship between Chinese, Mexican and American wages which influences current investment. China's primary export advantage throughout its export boom has been its wage differential, but Chinese wages are steadily increasing, growing faster than wages in Mexico. Of Chinese wages are now just six percent below those in many locations in the United States, but Mexican wages remain 25 percent below. While it may be true that 99 percent of Mexican manufacturing could be considered "under direct threat" from China due to the similarity in products, this threat does not take into account rising Chinese wages. As the wage gap decreases between U.S. wages and those of China, the proximity element of the trade equation between China and the United States will grow in importance and will demand use of Mexican labor. This has the potential to replace whatever maquiladora production may have been lost in the early years of Chinese competition.

Shortening logistics lines and exploiting lower wage rates serve as enablers for China's primary objective: the U.S. market itself. The Chinese export boom relies on markets to succeed and the U.S. market is everyone's target. China needs access to markets in the United States and to expand its penetration there to maintain growth. Investment in the Mexican maquiladora industry allows access to those markets, with the added advantage of reduced tariffs due to NAFTA and the lower Mexican wage rates. Doing business in Mexico in the

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⁴⁰ Jorge E. Mendoza, "The Effect of the Chinese Economy on Mexican Maquiladora Employment," *International Trade Journal* 24, 1 (2010), http://www.tandfonline.com/doi/pdf/10.1080/08853900903442921.

^{41 &}quot;China Chooses Mexico," FINITEK Blog.

⁴² Gallagher, *The Dragon in the Room*, 50-51.

⁴³ Ibid.

⁴⁴ Ibid.

maquiladora sector affords that access with lower transportation costs and established trade and private sector partnerships.⁴⁵ If China can insert itself into Mexico's relationship with the United States, it gains another entry point to the world's biggest importer.⁴⁶ Much has been said about China's urgent search for new markets, but China is not alone in this economic imperative.

MEXICO: CUSTOMER AND TRADE BROKER?

What exporting economies (specifically the United States and China) need most of all is more markets for their products. As noted above, China sees the United States as its primary marketing target with Mexico serving as the gateway to it. Clearly though, China also looks to Mexico as a potential future market in itself. Mexico's ripeness for investment and open business climate, combined with its recognized economic growth potential, earmarks it as one of the most dynamic and promising economies in the world. The partnerships already formed between U.S. business, combined with Mexico's proximity and its access to the growing economies in Central and South America, demand that the United States support anything that encourages growth in Mexico's economy.

Mexico's economy is extremely dynamic, expanding, and open to trade. Mexico has the second highest Gross Domestic Product of all Latin American countries, only bested by Chile.⁴⁷ In its "Doing Business 2011" report, the World Bank rated Mexico as the best country in Latin America in which to do business.⁴⁸ In 2010, Deloitte and the U.S. Council on Competitiveness rated Mexico 7th in its ranking of the world's most competitive manufacturing nations.⁴⁹ Although the past few years have seen much attention paid to the emerging BRIC (Brazil,

Sergeant, "China Versus Mexico."

⁴⁶ Ayala, "The Dragon Menace," 344.

⁴⁷ Hartman, "NAFTA, the Controversy," 27.

⁴⁸ Bruno Ferrari, "A Key to U.S. Competitiveness and Jobs: Mexico," *SIGNON San Diego*, August 21, 2011, http://www.signonsandiego.com/news/2011/aug/21/a-key-to-us-competitiveness-and-jobs-mexico/.

⁴⁹ Ibid.

Russia, India and China) economies, Mexico actually competes quite well with these nations in several arenas. Mexico's population is wealthier than any of the BRIC countries and its industrialization, education, and business climate exceeds that of Brazil.⁵⁰

Mexico currently accounts for the United States' second largest export volume.⁵¹ This export volume is inextricably tied to the maquiladora sector. As already noted, maquiladoras perform an intermediate role in the manufacturing process, adding value at a certain point using lower cost labor than is available in the United States. Therefore, U.S. exports to maquiladoras return as imports from Mexico, thus falling into a special category in the import/export equation. These exports enable U.S. manufacturing to compete at lower costs, but are not pure exports as one would usually define them. The United States, with its trade deficit (especially with China) needs more markets for its products, especially those markets purchasing complete goods as opposed to performing intermediate manufacturing. Though exports to Mexico have grown significantly in the past 20 years, the Mexican economy cannot yet absorb U.S. exports to its full potential.⁵² FDI from any source enables development of that potential and the United States should welcome it.

Already the growth occurring in Mexico and in Latin America identifies these as the up and coming markets for U.S. products. Not only are these economies expanding their capacity to absorb U.S. imports, but their general proximity makes them the optimum candidates for future U.S. complete goods exportation. Finally, Mexico stands as the gateway to the Latin American markets in terms of proximity, potential for port and shipping capacity development and because of the trading relationships Mexico already exercises with its Latin American neighbors. Much

⁵⁰ "The Cartel Problem, Mexico Could be a Giant if Only it Forced Its Moguls to Compete," *The Economist*, August 27, 2011, http://www.economist.com/node/21526896.

⁵¹ Ferrari, "Key to U.S. Competitiveness."

⁵² Hartman, "NAFTA, the Controversy," 13.

of Chrysler Fiat 500 production and sales targets South America thanks to the Mexican trade agreements that provide the linkage to those consumers.⁵³ Mexican automobile exports sold in Latin America increased 15 percent in the first six months of 2011.⁵⁴

U.S. investment continues to rise in the maquiladora sector, particularly in automobile manufacturing. In 2010, Chrysler announced a plan to spend \$550 million on retooling in its Toluca factory. Mexico's percent of Ford's U.S. car production went from 11.8 in 2006 to 16 percent in 2008. Nissan, Mazda, Volkswagen, Audi, Toyota and Honda also produce cars in Mexico, all increasing investment and manufacturing facilities. China, in selecting Mexico as a major FDI recipient, also recognizes the Mexican potential for growth and its openness to investment and foreign trade exchange. The expansion of Chinese exports and China's economic growth has increased its capacity for outbound FDI and it is clearly focusing much of that on Mexico. This is true across the board for LAC countries, but Mexico is the only country in Latin America whose comparative trade advantage trends in the same direction as that of China and India.

CONCLUSIONS

Though ostensibly strange bedfellows, the United States, China and Mexico may actually represent the most dynamic global trade triangle of the next few decades. U.S. well-established business and manufacturing practices, wed to Mexican potential for economic expansion, in part

⁵⁷ Pais, "Mexican Automotive Manufacturing Market."

⁵³ Thomas Black, "More Car Jobs Shift to Mexico," *Business Week*, June 28, 2010, http://search.proquest.com/docview/577284102?accountid-322;

magazine/content/10_27/b4185010570308.htm?chan=magazine+channel news+-+global+economics.

⁵⁴ Marca Pais, "Mexican Automotive Manufacturing Market Attracting Global Investments," *Imagen de Mexico*, August 25, 2011, http://www.sacbee.com/2011/08/25/3861742/mexican-automotive-manufacturing.html.

⁵⁵ Black, "More Car Jobs Shift."

⁵⁶ Ibid.

⁵⁸ Daniel Lederman, Marcelo Olarreaga, and Guillermo E. Perry, eds., *China's and India's Challenge to Latin America : Opportunity or Threat?* (Washington, D.C.: The World Bank, 2009), 7. ⁵⁹ Ibid.

financed by Chinese FDI, potentially augur success for all three players. Admittedly, such success may be somewhat qualified on the part of the United States and Mexico. China represents a whole new level of competition to both countries and is coming out on top in a number of areas, partly due to its wage rates (now a decreasing advantage) and growing manufacturing expertise. China's presence in the Western Hemisphere brings that competition closer to its rivals and shortens expensive lines of communication, potentially increasing the economic pressure. The relief valve for that pressure may come in the form of Chinese FDI itself. Chinese investment in Mexico is still investment in that economy and that is what Mexico desperately needs to grow and compete.

One problem that Mexico has seen since NAFTA is the recent stagnation of wages--even as productivity has increased. 60 Chinese FDI in the maguiladoras presents the opportunity to ameliorate this problem. As industry expands, wage competition will increase, which should raise wages in the limited available workforce (the Mexican population is now contracting rather than expanding). As competition for labor expands with Chinese maguiladora investment, so will the demand expand for a more educated work force. 61 Mexico will be forced to respond to these needs, as will entities providing FDI, which will add additional impetus for an increase in wage rates.

The Chinese competition issue cannot be ignored by any global player, but especially not by the United States, wary of losing its dominant global economic position, and Mexico, with such a magnitude of its manufacturing competing directly with China. Mexico certainly sees the potential for China drawing market share from more and more Mexican industries and driving them completely out of some markets. Here, Chinese FDI in Mexican maguiladoras shifts the

Hartman, "NAFTA, the Controversy."Ayala, "The Dragon Menace," 344.

balance. Undoubtedly related to the fear that the widening wage gap between China and Mexico will erode China's edge in the U.S. market, China's investment in the very industries with which China hitherto threatened to compete gives China a stake in their survival. It's difficult to imagine a more powerful business model for a growing Mexican corporation than one supported by Chinese financing and linked directly to U.S. manufacturing.

This triangular relationship of dependency between the United States, China and Mexico softens the economic threat that China portends to pose to the U.S. economy. Yes, China, with its exponentially expanding manufacturing capability, presents the United States with a worthy opponent in the world market, but the United States holds much of the purchasing power of the worldwide economic engine. China needs the United States as a market as much as it needs to continue to compete with U.S. products. The U.S. needs Mexico, both for its role in reducing cost in the U.S. manufacturing process and for its market potential as an importer of U.S. goods. Mexican maquiladora manufacturing, inextricably linked to the U.S. economy, would not survive without it, but needs to expand and China may be able to enable such expansion. The relationship between the three nations may be described optimistically as a symbiotic one, more ominously as one of "mutually assured destruction." Ultimately, though, mutual dependency rules out mutual destruction.

RECOMMENDATIONS

This study has focused entirely on Chinese economic involvement in Mexico, specifically in the maquiladoras. China, as noted above, remains a relatively new player in terms of outward FDI, only joining outward FDI investors in the year 2000. To date, the Chinese model of foreign investment has focused primarily on economic investment, with what appears to be little military investment or involvement outside of Asia. The paucity of information on China with respect to

its approach to anything akin to what the United States describes as Theater Security

Cooperation indicates a need for study of the potential for China's involvement in security issues affecting countries in which it invests. In the case of Mexico, not only its economic linkage to the United States, but its physical position on the southern border ensures that Mexican security and stability issues inevitably require attention in the U.S. military planning process. If the China—Mexico economic relationship matures as this analysis predicts, China may emerge as a significant stakeholder in the Mexican economy and, by extension, in Mexican security. A theater commander may need to factor an Asian player into the Western Hemisphere military picture.

Bibliography

- Ayala, E. and M. Villarreal. "The Dragon Menace: Is China Displacing Mexico's Trade with the United States?" *Analisis Economico* 24 no. 55 (2009). http://www.analisiseconomico.com.mx/pdf/5515.pdf.
- Beittel, June S. "Mexico's Drug Trafficking Organizations: Source and Scope of the Rising Violence: R41576." *Congressional Research Service:* Report 1-27, 2011. *International Security & Counter Terrorism Reference Center, EBSCO host.*
- Black, Thomas. "More Car Jobs Shift to Mexico." *Business Week*, June 28, 2010. http://search.proquest.com/docview/577284102?accountid-322; magazine/content/10_27/b4185010570308.htm?chan=magazine+channel_news+-+global+economics.
- Bouton, Lawrence, Paul Saumik and Erwin R. Tiongson. "The Impact of Emigration on Source Country Wages: Evidence from the Republic of Moldova." *World Bank Policy Research Working Paper Series*, (August 1, 2011). SSRN (1912356).
- Dutkowsky, Donald H., Anil Kumar and Raymond Robertson. "Purchasing Power Parity and Aggregaton Bias for a Developing Country: The Case of Mexico." *Journal of Development Economics* 90 (2009): 237-243. www.elsevier.com/locate/econbase.
- *The Economist*. "The Cartel Problem, Mexico Could Be a Giant If Only It Forced Its Moguls to Compete." August 27, 2011. http://www.economist.com/node/21526896.
- Ferrari, Bruno. "A key to U.S. Competitiveness and Jobs: Mexico." *SIGNON San Diego*. August 21, 2011. http://www.signonsandiego.com/news/2011/aug/21/a-key-to-us-competitiveness-and-jobs-mexico/.
- FINETIK Blog. "China Chooses Mexico as its Main Foreign Investment Destination." October 1, 2009. http://blog.finetik.com/2009/10/01/china-chooses-mexico-as-its-main-foreign-investment-destination/.
- Gallagher, Kevin P., and Roberto Porzecanski. *The Dragon in the Room*. Stanford, CA: Stanford University Press, 2010.
- Hanson, Gordon H. "Does Border Enforcement Protect U.S. Workers from Illegal Immigration?" *The Review of Economics and Statistics* 84, No. 1 (February, 2002): 73-92. JSTOR (3211740).
- _____. "Why Isn't Mexico Rich?" NBER Working Paper 6470, October, 2010. http://www.nber.org/papers/w16470.pdf.

- Hanson, Gordon H., and Raymond E. Robertson. "China and the Manufacturing Exports of Other Developing Countries." NBER Working Paper w14497, November, 2008. SSRN (1305507).
- Hartman, Stephen W. "NAFTA, the Controversy." *The International Trade Journal*, 25, 1: 5-34. http://dx.doi.org/10.1080/08853908.2011.532036.
- Hazard, Leah. "Mexico's War on Drugs: A War on the Economy?" *Global Envision*. September 8, 2008. www.globalenvision.org/2008/09/08/mexicos-war-drugs-war-economy.
- Hing, Bill Ong. *Ethical Borders : NAFTA, Globalization, and Mexican Migration*. Philadelphia: Temple University Press, 2010.
- Iacovone, L., B. Javorcik, W. Keller, and J. Tybout. "Walmart in Mexico: The Impact of FDI on Innovation and Industry Productivity." Working paper. Penn State University, 2009. http://spot.colorado.edu/~kellerw/IJKT 012609.pdf.
- Kehoe, Timothy J., and Kim J. Ruhl. "Why Have Economic Reforms in Mexico Not Generated Growth?" NBER Working Paper 16580, December, 2010. http://www.nber.org/papers/w16580.pdf.
- Lederman, Daniel, Marcelo Olarreaga, and Guillermo E. Perry, eds. *China's and India's Challenge to Latin America: Opportunity or Threat?* Washington, D.C.: The World Bank, 2009.
- Mendoza, Jorge, E. "The Effect of the Chinese Economy on Mexican Maquiladora Employment." *International Trade Journal* 24, 1, (2010): 52-83. http://www.tandfonline.com/doi/pdf/10.1080/08853900903442921.
- Pais, Marca. "Mexican automotive Manufacturing Market Attracting Global Investments." *Imagen de Mexico*. August 25, 2011. http://www.sacbee.com/2011/08/25/3861742/mexican-automotive-manufacturing.html.
- Pastor, Robert A. "Strengthening Our Continental Economy." *Philadelphia Inquirer*, September 20, 2011. http://www.philly.com/philly/opinion/20110920_Strengthening_our_continental_economy.html.
- Salidjanova, Vargiza. "Going Out: A Review of China's Outward Foreign Direct Investment." USCC (United States-China Economic and Security Review Commission) Staff Research Report, March 30, 2011. http://www.uscc.gov/researchpapers/2011/GoingOut.pdf.
- Sargent, J., and L. Matthews. "China versus Mexico in the Global EPZ Industry: Maquiladoras, FDI Quality, and Plant Mortality." *World Development* 37, 6, (2011): 1069-1082. http://ea.panam.edu/cbes/pdf/WorkingPaper1-06.pdf.

- Sauvant, Karl P., and Ken Davies. "What Will an appreciation of China's Currency Do To Inward and Outward FDI?" *Columbia FDI Perspectives*, 30, October 18, 2010. http://www.vcc.columbia.edu/files/vale/print/Perspective_30_-_Sauvant_and_Davies__Oct_18.pdf.
- Shirk, David A. "Drug violence in Mexico: data and analysis from 2001–2009." *Trends in Organized Crime* 13, no. 2/3: 167-174, 2010. *International Security & Counter Terrorism Reference Center*, EBSCOhost.
- U.S. Department of State, Bureau of Public Affairs. *The United States and Mexico: A Multi-Faceted Partnership*. Washington, DC: April 13, 2009.
- Utar, Hale, and Luis B Torres-Ruiz. "International Competition and Industrial Evolution: Evidence from the Impact of Chinese Competition on Mexican Maquiladoras." Working Paper, University of Colorado, December 1, 2010. SSRN (1802796).
- Weintraub, Sidney. *Unequal Partners: The United States and Mexico*. Pittsburgh: University of Pittsburgh Press, 2010.
- Wyler, Grace. "Drug Violence Threatens Economic Growth in Mexico's Business Capital." *Business Insider*. March 11, 2011. http://www.businessinsider.com/drug-violence-threatens-economic-growth-in-mexicos-business-capital-2011-3.